

IN THE CLAIMS

1           1. A brake disk for use with a disk brake system having brake pads for  
2 axially engaging the disk, comprising:  
3           a disk member axially arrayed about a central axis and having an outer  
4 rim and an inner rim, and an obverse face and a reverse face arrayed about a  
5 disk plane, wherein  
  
6           each said obverse face and reverse face is provided with circumferentially  
7 alternating protruding segments and indented segments, said protruding  
8 segments being adapted for physically engaging the brake pads.

1           2. The brake disk of claim 1, wherein  
2           each said protruding segment includes a leading edge for gripping the  
3           brake pad upon engagement.

1           3. The brake disk of claim 2, wherein  
2           each said leading edge has an angle of incidence with the brake pad in the  
3 range between  $+45^\circ$  and  $-45^\circ$ .

1           4. The brake disk of claim 1, wherein  
2           each said indented segment is open to said outer rim and said inner rim  
3           such that air flow is facilitated therethrough.

1           5. The brake disk of claim 1, wherein  
2           each of said outer rim and said inner rim is scalloped in shape to provide  
3           increased surface area for heat dissipation..

1           6. The brake disk of claim 1, wherein  
2           each said protruding segment is circumferentially wider than the adjacent  
3           indented segments.

1           7. The brake disk of claim 6, wherein  
2           The circumferential width ration of said indented segments to said  
3           protruding segments is in the range of 10% to 40%.

1           8. In a disk braking system for use in transrotary motion applications,  
2           including brake pads for engaging the surface of a brake disk the improvement  
3           comprising:

4 providing the brake pad engaging surface of the brake disk with  
5 alternating protruding segments for engaging the brake pads and indented  
6 segments for facilitating cooling.

1 9. The improvement of claim 8, wherein  
2 each said protruding segment is circumferentially wider than the adjacent  
3 ones of said indented segments.

1 10. The improvement of claim 9, wherein  
2 each said indented segment has circumferentially width of less than 40%  
3 of that of said protruding segments segments.

1 11. The improvement of claim 8, and further including  
2 an irregularly shaped outer rim and an irregularly shaped inner rim such  
3 that expanded surface area is provided to aid heat dissipation therefrom.

1 12. The improvement of claim 8, and further providing that  
2 the opposing axial surfaces of the disk both include alternating protruding  
3 segments and indented segments and the indented segments on one surface are

4       situated axially opposite protruding segments on the opposing surface.

1       13.The improvement of claim 8, wherein

2       each said protruding segment is circumferentially wider than the adjacent  
3       ones of said indented segments.

1       14.The improvement of claim 8, wherein

2       each said protruding segment has a leading edge for engaging with and  
3       gripping the surface of the brake pad.

1       15.The improvement of claim 14, wherein

2       Each said leading edge is adapted to engage the brake pad at a radial angle  
3       of less than 45 degrees.